Integrated Public Alert and Warning System's (IPAWS)
Geo-Targeted Alerting System (GTAS)
Pilot Project Risk Management Plan

April 21, 2009

NOAA/OAR/ESRL
Global Systems Division
Information Systems Branch

Boulder, CO

Table of Contents

Goal

The GTAS project consists of major system activities such as software development, hardware purchase, site coordination, and system integration that inherently contain a certain amount of risk. In order for the project to be successful, these risks need to be identified early and properly managed throughout the life of the project.

Purpose

The GTAS risk management plan will help assure that the project stays on schedule, within budget, and that the deliverable will meet the customer's needs. The adopted risk management approach will identify potential risks before they become a problem and possibly jeopardize the success of the project. Each member of the project team is responsible for identifying potential risks, reporting these to the risk management team and, as appropriate, assist in resolving the risk. The plan provides the project team the common goals, strategy, and methods for performing risk management.

Objectives

The Specific objectives of this plan are to assure that the GTAS software is dependable, of high quality, and meets the project requirements.

Scope

This plan describes the risk management approach and the responsibilities of the risk management personnel. It augments the GTAS Project Management Plan and is augmented by the GTAS Risk Mitigation Plan.

Risk Management Strategy

Risk management methodology to be used

The risk management process is scalable to ensure that the level, type, and visibility of risk management are commensurate with both the risk and the importance of the project.

Risk Identification

Risks will be identified by the project manager and technical staff based on experience from similar development efforts and augmented to include other project specific risks, as appropriate and when identified.

Categorize Risks

The Risk will be grouped into categories. The project will create additional categories, as required to accommodate unforeseen risks.

Risk Impact Assessment

For each risk identified, assess the risk event in terms of likelihood of occurrence on a scale of (low-medium-high) and its effect on project objectives on a scale of (low-medium-high) if the risk event occurs. This information will be used to prioritize the risk using established threshold criteria.

Prioritize Risks

Risks that meet the threshold criteria will be recorded in the Risk Mitigation Plan.

Risk Mitigation Planning:
- For each risk in the Risk Mitigation Plan, determine the options and actions to reduce the likelihood or consequences of impact to the project's objectives.
- Determine the response based on a cost/benefit analysis (cost vs. expected effectiveness).

- Describe the actions to be taken to mitigate the risk
- Describe the actions to be taken when the risk event occurs (contingency plan)
- Assign responsibilities for each agreed upon response
- Assigned a "due date" where risk responses are time sensitive
- Incorporated this information into the Risk Mitigation Plan

Risk Mitigation Tracking:
- Document the dates and the actions taken to mitigate the risk
- Document the actions taken when the risk event occurred (contingency plan)
- Document any subsequent actions taken
- Incorporate this information into the Risk Mitigation Plan

Monitor Risk:
- Establish systematic reviews and schedule them in the project schedule.
- These reviews are to ensure:
    - All of the requirements of the Risk Management Plan are being implemented
    - Assess currently defined risks
    - Evaluate effectiveness of actions taken
    - Status of actions to be taken
    - Validate previous risk assessment (likelihood and impact)
    - Validate previous assumptions
    - State new assumptions
    - Identify new risks
- Risk Response Tracking
- Communications

Control Risk:
- Validate mitigation strategies and alternatives
- Take corrective action when actual events occur
- Assess impact on the project of actions taken ($$, time, resources)
- Identify new risks resulting from risk mitigation actions
- Ensure the Project Plan (including the Risk Management Plan) is maintained
- Revise the risk management documents to capture results of mitigation actions.
- Revise Risk Mitigation Plan
- Communications

Assumptions that have a significant impact on project risk
- GTAS Client sites have adequate hardware to support project goals.
- GTAS Client sites have adequate internet connectivity to support project goals.
- GTAS Client sites can overcome firewall issues to allow communications between GTAS systems.
- GTAS Client and Server sites are adequately manned so that they can support training and operational use of the systems.

Roles and responsibilities unique to the Risk Management function
Risk Manager- Greg Pratt (Technical Lead) responsible for maintaining risk tracking documentation and guiding the risk management processes.

Risk Evaluation Team- Consists of Risk Manager and experts from the various technical areas associated with the GTAS project. The team consists of the following individuals:
- Greg Pratt (Risk Manager and Technical Lead)
- Herb Grote (Technical Advisor)
- Dan Birkenheuer (WRF-NMM Weather Forecast Model)
- Roland Draxler (HySPLIT Dispersion Model)

- Jim Ramer (AWIPS)

The Risk Evaluation Team is responsible for:
1) Identifying risk.
2) Categorizing risk.
3) Assessing risk impact.
4) Prioritizing risk.
5) Developing risk mitigation strategies.
6) Controlling risk.

Risk Mitigation Tracking Coordinator- Rich Jesuroga (Program Manager) communicates risk and risk mitigation actions to GTAS program sponsor.

Risk Management Milestones

Milestone	Date
Risk Management Plan approved	04/20/09
Risk Mitigation Plan approved	04/21/09
Risk Management Reviews scheduled	04/20/09

Risk rating/scoring techniques
The project will rate each identified risk (High, Medium, Low) based on the likelihood that the risk event will occur and the effect on the project's objectives if the risk event occurs. This will be a subjective evaluation based on the experience of those assigned to the project's risk management team.

Establish risk thresholds
The project will establish risk responses for risk events that have been determined to have a rating of "High".

Risk communications
Risks will be identified, categorized, prioritized, and be given a risk mitigation strategy by the Risk Management Team. The Risk Management Team will create a Risk Mitigation Plan which will be published on the GTAS web site under the PROJECT tab (http://fxc.noaa.gov/GTAS/project). The Risk Management Team will brief the Risk Mitigation Tracking Coordinator as events occur, actions taken, additional risks identified, and Risk Mitigation strategies. The Risk Mitigation Tracking Coordinator is responsible for communicating with DHS monthly and as required to keep DHS informed on events as they occur.

Risk tracking process
The risk tracking process consists of five basic steps that are continually repeated through the life of the project: 1) identify the risks, 2) analyze the impacts, 3) plan the appropriate actions, 4) track the risks, 5) and control the actions. Continuous communications throughout all of the risk management functions is vital.

A continuous set of activities to identify, confront, and resolve technical risk.
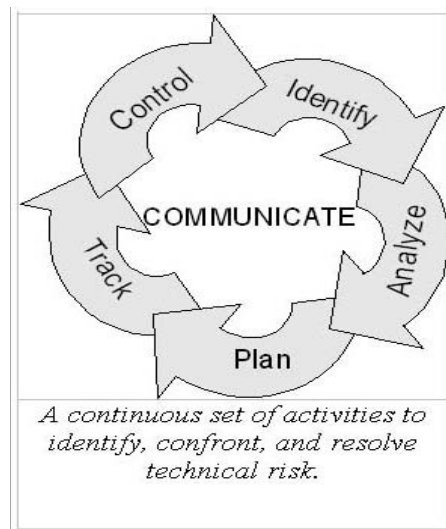
The Risk Manager will be responsible for tracking risks identified in the Risk Mitigation Plan. The Risk Mitigation Plan will be updated to reflect risks that are no longer relevant and newly identified risks. The GTAS web site's "Site Implementation Status" page is color coded with orange representing actions identified as high risk as the actions are accomplished the color associated with the action will be changed to white and the action will be checked as a completed task item. As new actions are identified as high risks they will be added to the "Site Implementation Status" page. The basic model followed by this plan was developed by the Software Engineering Institute. It has been modified slightly to meet the needs of the GTAS project.